

THE GENUS *CLASTOPTERA* IN THE AMERICAS
SOUTH OF THE UNITED STATES.

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While restudying the species and varieties of *Clastoptera* north of Mexico¹ the writer again went over his material from Mexico, the West Indies and South America, together with the literature, and found varieties of all four of the northern species. Three of these species were widely distributed and apparently many times duplicated in the previous descriptions. Many of these forms will no doubt prove to be distinct varieties and some of the names will antedate the names used in previous publications for the same species and variety. There would, however, appear to be no advantage in making partial substitutions at this time when a thorough study of the southern fauna will be required before any satisfactory revision can be expected or any possibility of a stable nomenclature established.

In the meantime, it does appear possible to refer many of these forms to the appropriate species and to recognize a fifth distinct structural type. The five distinct species which present good structural characters are enumerated below. These species vary in color through pale, spotted or lined, to definitely black forms. In general, the paler forms are large and the darker ones smaller. The first four of these species are characterized in the previous publication.

1. *Clastoptera obtusa* Say (1825) was the first species in the group to be named, so this form will retain that name for the species and for its typical banded and saddle marked variety.

2. *Clastoptera xanthocephala* Germ. (1839) is the oldest possible name for this species unless *cimicoides* Germ. that precedes it should prove to be the same species. *C. cimicoides* is as small as *xanthocephala* and has the banded face but the other characters appear to indicate a variety of *obtusa*. This is the smallest species in the group and the least variable.

3. *Clastoptera proteus* Fitch (1851) is the oldest North American name for this species but Germar's small *nigra* (1839) from Brazil is probably a dark variety, and if so this name will super-

¹ *The Genus Clastoptera North of Mexico*, by E. D. Ball, Can. Ent., vol. 58, pp. 103-112. 1927.

sede *proteus* for the species but not for that variety. This is a relatively small, globose, sharply black and yellow species with a bright yellow face crossed by a broad black band. This yellow face, or at least the lower half, persists in even the blackest varieties.

4. *Clastoptera lineatocollis* Stål (1854) is apparently the oldest name for this arid region form described from California. Only one of Stål's species precedes this name and none of Germar's descriptions appear to fit this form. The six or seven narrow and definitely black bands on the pronotum, except in the darkest varieties, render this a strikingly distinct species.

5. *Clastoptera ochrospila* Jacobi (1908) described from Bolivia and Peru seems to be a very distinct structural and color type. It is still more globose with the face only slightly produced, the bulla large and placed well back against the apical nervure. The typical form is very strikingly marked, black with the face and a small spot on vertex creamy. There are two immense circular spots on the pronotum, and an equally large pair on the disc of the elytra, the scutellum and a broad rectangle on the closed apices of the elytra yellow.

Germar in 1839 described seven species, two of which were from the United States and have been discussed previously. The other five were from Brazil. Of these *darnoides*, *cimicoides* and *flavifrons* (Lallemand gives Mexico for this) appear by their pronotal bands and lines on front to be obscure varieties of *obtusa*, commonly found in collections from that region, while *scutellata* and *nigra* both have the characteristic yellow and black face and appear to be black varieties of *proteus*.

Stål in *Nya Hemiptera*, 1854, described five species, one of which (*lineatocollis* from California) has been previously placed. Three Brazilian species, *sahlbergi*, *fuscomaculata* (omitted from Lallemand's list) and *obtusata*, all appear to be varieties of *obtusa*, while *funesta* from Honduras is certainly a small black variety of *proteus*, which Fowler reports as abundant in Mexico.

Stål in his *Rio Janeiro Hemiptera Fauna*, 1862 (1858), lists three Germar species and described seven as new. The first one, *picturata*, is undoubtedly *proteus*, very near variety *flava*, while *pallidiceps* and *tibialis* appear to be dark forms of *obtusa* with light saddles (Lallemand gives these as equalling *scutellata* Germ. but they are described as with lines on front while *scutellata* has the black and yellow of *proteus*). *C. brachialis*, *nubifera* and

fuscipes appear to be forms of *obtusa* very close to variety *testacea*, while *femoralis* appears to be a pale yellow form of *xanthocephala*.

Uhler in Proc. Ent. Soc. Phila., 1864, described *undulata* a small dark variety of *obtusa*, and *stolida* a still darker variety near variety *tristis*, both from Cuba. The writer's material indicates that they are distinct from any North American variety.

Berg in Hemiptera Argentina, 1869, described *Considea secunda*, which he later transferréd to *Clastoptera*. The small size, lines on face and obscure color all suggest a variety of *xanthocephala*.

Fowler in the Biologia (the first three species *funesta*, *globosa* and *compta* in 1897, the remainder 1898) lists sixteen species from Mexico and Central America, of which thirteen are described as new. Examples of all four of the North American species have been examined from this region, but Fowler lists only one—*obtusa*. From his description and figures his new forms can be assigned to their proper species and most of them to a definite varietal status, but as their relationship to the older names is still in many cases problematical it will be of little value to go farther than to point out relationships to established forms. Five of Fowler's species appear to be forms of *obtusa*, as follows: *C. antica* is a distinct dark variety near *borealis*; *C. dimidiata* = variety *achatina*; *C. laenata* a small dark form of his *antica*, while *C. semivitrea* and *chiriquensis* are too poorly characterized to be assigned to definite varietal status.

Five of Fowler's new species appear to belong to the *xanthocephala* group, as follows: *C. minima* = typical *xanthocephala*; *C. rufescens* is a tawny variety; *C. unicolor* is the glaucous variety, formerly called *glauca*. All of these forms are abundant throughout the region and are found in all collections. *C. irrorata* is a distinct and somewhat rarer variety, while *C. compta* is apparently a distinct and highly ornamented variety of this usually plain species. Fowler describes it as "black" with an ivory band on pronotum and a broad ivory saddle, but figures an example with a pale tawny ground color. Both forms are at hand and show the normal *xanthocephala* transition in color.

The remaining three of Fowler's new species, as well as *funesta* Stål which he lists, appear to belong to the *proteus* group, as follows: *C. flavivitta* = the common variety *flava*; *C. stali* is shiny black with yellow markings and probably represents a distinct

variety from any described; *funesta* Stål, as mentioned above, is a small, dark variety, while *globosa* Fowler is probably the larger female of the same form. He says it is almost four times the bulk but his length lines show little difference. Fowler says "metapodium light yellow"; if this refers to the whole front then it might be a black variety of *obtusa* or *ochrospila*, but as he says it closely resembles *funesta* in structure and color it will probably be found to have the black median band of the *proteus* forms.

Baker in Ent. News, '00, described *C. bimaculata* as new. This appears to be identical with Fowler's figure of the testaceous variety of his *compta*, but as Fowler in his description gives the color as "black" while Baker says "the color of a very pale *xanthocephala*," the form with the black ground color may be known as *C. xanthocephala* variety *compta* Fowler and the one with the pale background as variety *bimaculata* Baker.

Jacobi in 1908 described a single new species from Bolivia and Peru as *C. ochrospila* that appears from example in the writer's collection to be a new and strikingly distinct type in both structure and color. Along with the typical spotted form there was a single shiny black example that appears to be an unnamed variety. This suggests that this species, like the others, will be found to range through the usual pale, spotted or lined and black forms. From its known distribution it is likely that it will prove to be as common a form in the arid regions of South America as the equally distinct and brilliantly marked *lineatocollis* is for the arid region of North America.

Clastoptera ochrospila variety **nuba** var. nov.

Slightly smaller than the species, but with the same structure, globose, entirely black above, highly polished; lower half of face white, elytra entirely coriaceous, opaque. Length of male 3.5 mm. Holotype male from Peru in author's collection.